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Spontaneous atraumatic segmental intracavernosal hematoma: Case report

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Abstract

Background: Spontaneous or idiopathic penile hematoma is a rare phenomenon and has been described in only few isolated reports. The case presented is novel with respect to its completely spontaneous nature and without preceding trauma in a patient lacking any pertinent risk factors that may predispose to a bleeding complication.

Case Presentation: A healthy 37 year-old-male presented to the emergency department with a 5-day history of lower scrotal/perineal discomfort. There was no preceding external genital trauma. Patient records were accessed via the written emergency department record and electronic imaging system. Imaging with infused computed tomography demonstrated an 8 cm X 1.7 cm soft tissue enlargement within the right corpus cavernosum. Given the minimal symptoms, lack of external trauma and retained spontaneous voiding the patient was managed conservatively with oral analgesia and without anticoagulation therapy. After 6 months follow up, he was asymptomatic and continued to have normal voiding and erectile function.

Conclusions: Isolated intracavernosal hematoma is rare in young healthy patients without coagulopathic disorders. The diagnosis may be easily missed when symptomology is vague. This case highlights the importance of a thorough clinical examination and an index of suspicion for such an injury in the differential diagnosis of vague perineal discomfort. As well, we demonstrate the appropriate use of conservative treatment in the management of such cases.

Keywords

Penile hematoma, intracavernosal, spontaneous injury

Introduction

Penile hematoma is commonly associated with direct blunt genital trauma to a fully erect or partially erect penis during vigorous sexual intercourse as the result of rupture of the tunica albuginea. The classic presentation of a penile pain, a 'cracking' sound, rapid detumescence and penile edema with or without ecchymosis is often observed, leading to rapid clinical detection and diagnosis [1]. Occasionally, diagnostic imaging may be employed to identify a disruption in the tunica albuginea to determine the exact size and location of the injury prior to surgical intervention. Subtle injuries of the genitourinary system may be missed when presenting symptoms and signs are vague and variable [2].

Spontaneous or idiopathic penile hematoma is a rare phenomenon and has been described in only few isolated cases. Idiopathic penile hematoma has been described in cases of hematologic disease, illicit drug abuse, sexual activity, bicycle riding and airplane flight [3,4]. The mechanism is believed to be related to injury to the subtunical venous plexus or to the smooth muscle trabeculae in the absence of complete tunical disruption [2].

Here we describe the case of a young male who suddenly develops a spontaneous partial unilateral segmental hematoma of the corpus cavernosum without preceding sexual intercourse or associated blunt genital trauma.

Case Presentation

A 37 year-old-male presents to the emergency department following a 5-day history of pain beneath the scrotum in the perineal region. The discomfort began acutely and developed into a persistent dull ache. He noted that he was lifting weights (bicep curls) while seated when the symptoms initiated. The patient and his partner denied any history of preceding sexual intercourse or blunt trauma to the external genitalia or perineum. He described the sensation of a "pulled muscle". He denied hearing an audible "pop" sound. He did not have an erection at the time of the injury and denied attempting to achieve one since the time of the pain onset. Review of symptoms was unremarkable including no constitutional symptoms, testicular pain, voiding dysfunction, gross hematuria or hematospermia. His medical history includes depression for which he takes Paroxetine. Family history was negative for genitourinary malignancy. His discomfort was controlled with IV Toradol.

On physical examination, he was a well appearing male in no active distress. The external genitalia were normal in appearance with no evidence of ecchymosis, edema, or penile deformity. There was mild to moderate tenderness to the right base of the penile shaft with mild focal tenderness in the right perineum but no palpable mass. He had no scrotal swelling or bruising. No palpable inguinal lymphadenopathy was found. Both testicles were soft, symmetrical and non-tender to palpation. Cremasteric reflexes were intact bilaterally and with normal orientation. No perineal bruising or butterfly hematoma was identified. On digital rectal examination, he had diffuse tenderness but no focal findings.

Laboratory investigations including a complete blood count, electrolytes, BUN and creatinine were

within normal limits. Urinalysis was negative for infection or hematuria. His C-Reactive Protein was elevated at 89 mg/L (normal <5 mg/L).

A contrast-enhanced computed tomography (CECT) scan was ordered. An 8 cm X 1.7 cm well defined soft tissue enlargement within the right corpus cavernosum at the base of the penis was identified. The left corpus cavernosum was normal. No collections, masses or enlarged lymph nodes were identified. See Figure 1.

The patient was ultimately discharged with oral analgesia and instructed to maintain bed rest, and local supportive care including daily icing. No oral or injection anticoagulation was prescribed. At 6 months-follow up, his pain had improved and he continued to have normal erections and voiding function. Repeat imaging was not pursued.

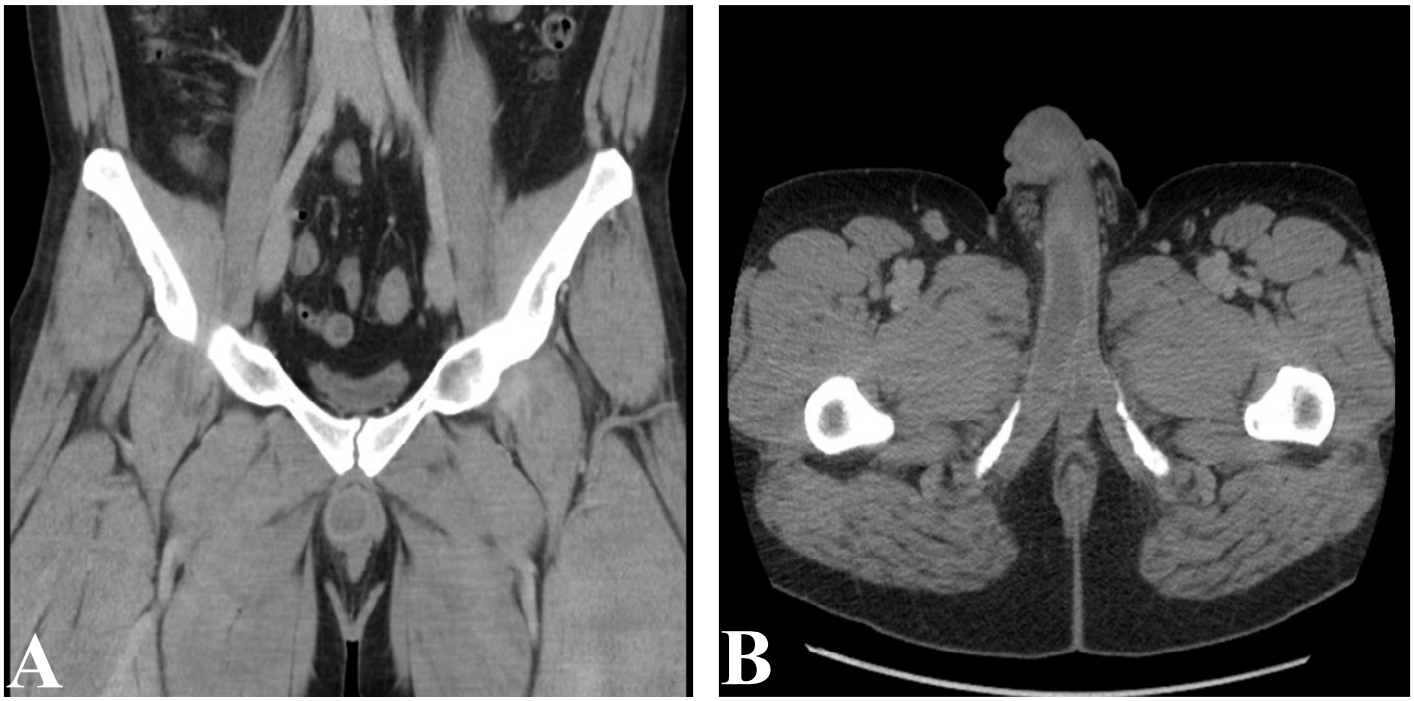

Figure 1: Coronal (A) and axial (B) view contrast-enhanced computed tomography (CECT) scans demonstrating right corporal cavernosal enlargement with hypo-attenuation extending from the approximate penoscrotal junction to the base of the penis at the crus.

Discussion

Spontaneous partial intracavernosal hematoma is a rare event and has been described in a limited number of cases in the literature. In these, hematologic disorders, prior priapism, long-distance bicycle riding and airplane riding have been implicated [3]. In the case we have described, penile intracavernosal hematoma developed following seated bicep curls with no preceding direct blunt genital trauma. To the best of our knowledge, no such case has been reported previously in the literature.

In 2000, Matteson et al., reported on the first two documented cases of intracavernosal hematoma including an idiopathic etiology in one and following prolonged sexual intercourse in the other. In both cases, the patients underwent evaluation with imaging including magnetic resonance imaging (MRI) and ultrasonography, respectively. The first was managed using a surgical approach with penoscrotal incision

and corporotomy with evacuation of the hematoma. The second was managed with localized ultrasound-guided needle aspiration. Both had an uneventful recovery and featured no residual sequelae [5].

Hulth et al., suggest that a pre-existing fibrous septum between the proximal and distal parts of one of both corpora cavernosa increased the risk of thrombosis or priapism following hematoma development in these patients. When MRIs were reviewed between patients with and without this condition, the fibrous septum was noted to be present in patients that have developed this condition [3].

The optimal management of intracavernosal hematoma without evidence of disruption of the tunica albuginea has been recommended to be conservative. Adequate analgesia with or without systemic anti-coagulation has been recommended as first line therapy. Patients managed without anticoagulation have not suffered any adverse effects related to this. Rarely, surgical intervention may be indicated if severely symptomatic, priapism or obvious penile fracture has occurred [3].

One limitation in this case was that no follow up imaging was obtained to assess for radiographic re-solution of the hematoma and to assess for any potential sequelae. However, given the complete resolution in symptoms and normal genitourinary function, it was deemed acceptable to refrain from pursing repeat imaging where management would not be impacted regardless of the findings.

Isolatedatraumatic partial intracavernosal hematoma is rare in young healthy patients without coa-gulopathic disorders. Diagnosis may be missed when no external evidence of penile trauma exists. The appropriate management may be unclear when the conventional signs of penile fracture are absent and voiding is spontaneous and without obstruction or hematuria. This case highlights the appropriate use of conservative observation in the management of non-traumatic spontaneous intracavernosal hematomas.

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